THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JUERGEN MOHR, KNUT OPPENLAENDER, WALTER DENZINGER, HEINRICH HARTMANN, RICHARD BAUR, CHARALAMPOS GOUSETIS and ALEXANDER KUD

Appeal No. 1995-4997
Application No. 08/089,436

HEARD: February 7, 2000

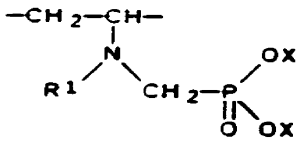
Before KIMLIN, GARRIS and KRATZ, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

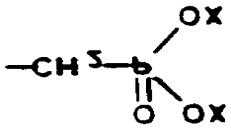
This is an appeal from the final rejection of claims 5, 6, 8-10 and 12-20, all the claims remaining in the present application. Claim 5 is reproduced below:

5. In a water-carrying system subject to the formation of scale, the improvement comprising the water in said water-carrying system comprises from 0.1-100 ppm of a phosphono-methylated polyvinylamine which contains as characteristic structural elements, units of the formula



(I)

wherein R^1 is hydrogen, C_1-C_6-alkyl or



and X is hydrogen an alkali metal, ammonium or one equivalent of an alkaline earth metal;

wherein said polymer has a K value of from 10 to 100.

The examiner relies upon the following references as evidence of obviousness:

Hwa (Canadian patent)	856,193	Nov. 17, 1970
Justice et al. (Justice)	4,830,837	May 16, 1989

Appellants' claimed invention is directed to a method of inhibiting scale deposition in a water-carrying system by

employing a water-carrying system comprising a phosphono-methylated polyvinylamine having recurring units of the recited formula (I). According to appellants, they "have discovered that such a water-soluble phosphonomethylated amine exhibits unexpectedly high Ca^{+2} ion compatibility, and accordingly is more effective, than the corresponding monomeric chelating agent, at inhibiting scale formation in a water-carrying system in need thereof" (page 2 of principal brief, emphasis in original). Appealed claims 5, 6, 8-10 and 12-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hwa in combination with Justice.

Upon careful consideration of the opposing arguments presented on appeal, it is our judgment that the prior art applied by the examiner fails to establish a prima facie case of obviousness for the claimed subject matter. Accordingly, we will not sustain the examiner's rejection.

While we certainly appreciate and recognize the thorough effort expended by the examiner in articulating his position in the Examiner's Answer and Supplemental Examiner's Answer, we simply find no teaching or suggestion in the applied references, taken singularly or in combination, of utilizing

the presently claimed phosphonomethylated polyvinyl amines in a method of inhibiting scale deposition. It is not of little significance that appellants' specification, at page 2, describes the claimed polyvinylamines as new compounds, and neither of the applied references discloses the claimed compounds. Even assuming, for the sake of argument, that it would have been obvious for one of ordinary skill in the art to substitute the phosphonic acid group-containing ion exchange resins of Justice for the amino polymethyl-phosphonic acids of Hwa, this would not result in the claimed invention. Justice expressly teaches that "[t]he ion exchange resin matrix or backbone represented by R may include, for example, copolymers of styrene with divinylbenzene, copolymers of a methacrylate or acrylate with divinylbenzene, phenol-formalin resins, etc." (column 3, lines 55-59). Justice does not teach the claimed polyvinyl backbone, and the examiner has not established on this record that a polyvinyl backbone would have been obvious to one of ordinary skill in the art in view of the polymer backbones disclosed by Justice. While the examiner concludes that "[i]t would have been obvious to bond an aminomethylphosphonic acid functional group(s) to a polymer

backbone because Justice teaches the embodiment" (page 6 of Examiner's Answer), there is no teaching in either Hwa or Justice that the relevant functional groups can be bonded to any polymer backbone, in general, let alone the specific one claimed by appellants. In addition, the examiner has not adequately refuted appellants' argument that Hwa's disclosure of a synergistic combination of amino polymethyl-phosphonic acids and specific carboxylic acids would have militated against substituting the polymers of the claimed invention for the compounds disclosed by Hwa.

Since it is our judgment that the examiner has not established a prima facie case of obviousness for the claimed subject matter, we find it unnecessary to address the probative value of appellants' specification and declaration evidence of nonobviousness.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN)
Administrative Patent Judge)
)
)

BRADLEY R. GARRIS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
PETER F. KRATZ Administrative Patent Judge	)	

ECK:clm

Oblon, Spivak, McClelland, Maier
& Neustadt
Fourth Floor
1755 Jefferson Davis Hwy.
Arlington, VA 22202